

WHAT IS CLAIMED IS:

1. A hockey stick comprising a shaft and a blade, the blade having a core substantially enclosed within an outer layer, the outer layer comprising a primary impact layer and a secondary impact layer that generally oppose one another, the core comprising a foam-filled cell structure comprising a plurality of cell walls, the core arranged between the primary and secondary impact layers and configured so that longitudinal axes of the cell walls generally extend in a direction from the primary impact layer toward the secondary impact layer.
2. The hockey stick of Claim 1, wherein the longitudinal axes of the cell walls generally extend in a direction generally perpendicular to the primary impact layer.
3. The hockey stick of Claim 1, wherein the primary and secondary impact layers comprise a laminate structure.
4. The hockey stick of Claim 3, wherein the cell walls substantially engage the primary impact layer laminate structure.
5. The hockey stick of Claim 4, wherein the cell walls substantially engage the secondary impact layer laminate structure.
6. The hockey stick of Claim 4, wherein a layer of foam is disposed between the cell walls and the secondary impact layer laminate structure.
7. The hockey stick of Claim 1, wherein the cell walls are constructed of a different material than the outer layer.
8. The hockey stick of Claim 1, wherein the cell structure is configured to dampen vibrations from impacts to the primary impact layer.
9. The hockey stick of Claim 1, wherein the cell structure is more compliant than the outer layer.
10. The hockey stick of Claim 9, wherein the outer layer is substantially rigid and the cell structure is semi-rigid.
11. The hockey stick of Claim 1, wherein the cell structure comprises an open cell structure.
12. The hockey stick of Claim 1, wherein the cell structure comprises a closed cell structure.

13. The hockey stick of Claim 12, wherein cell walls intersect to form a plurality of closed cells.

14. The hockey stick of Claim 13, wherein the cell structure is arranged in a honeycomb structure.

15. The hockey stick of Claim 12, wherein a diameter of the cells is between about 1/20 in. and 1/2 in.

16. The hockey stick of Claim 15, wherein the diameter is between about 1/8 in. and 3/8 in.

17. The hockey stick of Claim 1, wherein the blade core comprises a first portion and a second portion, and the first portion has different structural properties than the second portion.

18. The hockey stick of Claim 17, wherein the first portion comprises a cell structure and the second portion does not comprise a cell structure.

19. The hockey stick of Claim 17, wherein the first portion comprises a foam having greater structural strength than a material of the second portion.

20. A method for making a sporting implement blade portion configured to withstand repeated impacts, comprising:

providing a core comprising a foam-filled cell structure, the cell structure comprising a plurality of cell walls that cooperate to define a plurality of cells therebetween, the cell walls arranged so that each cell has a longitudinal axis; and

enclosing the cell structure in a generally rigid outer layer having an impact surface;

wherein the cell structure is arranged relative to the outer layer such that the longitudinal axis is generally transverse to the impact surface.

21. The method of Claim 20, wherein the cell structure is arranged so that at least some of the cell walls are substantially in contact with the outer layer.

22. The method of Claim 20 additionally comprising treating the foam so that it preferentially expands in a desired direction prior to enclosing the core within the outer layer.

23. The method of Claim 22, wherein the core is arranged so that the foam preferentially expands in a direction generally away from the impact surface.

24. The method of Claim 23, wherein treating the foam comprises roughening a surface of the foam.

25. The method of Claim 20, wherein providing the core comprises providing a sheet stock of a foam-filled cell structure and cutting it to a desired size.

26. The method of Claim 20, wherein providing the core comprises providing a cell structure shaped to generally approximate a shape of the core, placing the shaped cell structure in a mold that approximates the shape of the core, and injecting an expanding structural foam into the mold.

27. A sports stick having a handle portion and a contact portion, the contact portion configured to impact a sports implement and having a primary impact face and a secondary impact face that generally oppose one another, the contact portion further comprising a core substantially surrounded by a cover, the core comprising a celled structural member constructed of a different material than the cover and comprising a plurality of cell walls, the cell walls arranged to extend generally in a direction from the primary impact face to the secondary impact face.

28. The hockey stick of Claim 27, wherein the celled member is more pliable than the primary impact face.

29. The hockey stick of Claim 28, wherein the celled member is configured to absorb and dampen vibrations from impacts to the primary impact face.